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FACTORS RELATED TO SMALL TOWN GROWTH AND DECLINE IN OHIO, 1930 TO 1970*

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Except as a dot on the state highway map and a classification in the map's margin as unincorporated, little is known about the many small hamlets, villages, and bedroom communities scattered across the U.S. landscape. Census data for incorporated towns in non-metropolitan areas show that a majority of those with less than 500 inhabitants lost population between 1950 and 1970, while larger towns mostly gained population (Fuguitt, 1971; Fuguitt and Thomas, 1966). Studies of both incorporated and unincorporated places leave little doubt that small towns have lost many of their trade and service functions (Fuguitt and Deeley, 1966; Brunn, 1968; Johansen and Fuguitt, 1973). The mass media capitalize on these events with such stories as "The Sale of Podunk Center," "George is Up For Sale," "Residents Chip in to Buy Town," "Small Town For Rent," and "Iowa Mayor Selling Town." Such stories foster a stereotype of small towns as sick or dying.

Most statistics, however, refer to incorporated places and few are available on unincorporated places (for an exception, see Marshall, 1946; Fuguitt, 1965a). The U.S. Census enumerates incorporated places but only those unincorporated places with 5,000 inhabitants or more in urbanized areas and with 1,000 inhabitants or more outside urbanized areas. For example, in 1970 in Ohio there were 936 incorporated places which ranged in population from 43 to 750,903. More than 4,000 named places in Ohio, however, are not incorporated and have fewer than 1,000 people. Their populations are counted as rural nonfarm or lumped in the urban category. These small unincorporated towns do not separately qualify for federal revenue sharing and are politically represented at the local level

by township and county governments--not by mayors and councils. The problems of people in unincorporated towns could conceivably be quite different from those of people living in incorporated towns of similar size or in open farm country. The Bureau of the Census recognizes this problem and has considered including a question in the 1980 census to help to delineate the number of people living in small unincorporated towns.

The chief problem lies in defining a small town. For incorporated areas, "small" town has usually meant towns with populations of less than 2,500. An additional problem exists in determining the boundaries of the unincorporated town for enumeration purposes. Finally, there is a socio-cultural meaning to small town. A traditional ideology of small towns has held that they are "a good place to live" (See for instance "The Special Allure of Small Towns," Wisconsin State Journal, 1975). Their supposed low crime rates, friendly atmosphere, and low levels of pollution play on the image of "Small Town, I Love You" (Columbus Dispatch, 1975; Goist, 1977).[2]

A small town is here defined as a place recognized by a name by local residents. It must also have a built-up section and does exclude persons living on farms and others living at a distance. The population nucleus must have had between 75 and 2,500 inhabitants in 1930 to be considered a small town and the named place must have been listed in 1930 and/or 1970 in Rand McNally's Commercial Atlases.[3] The cut-off points of 75 and 2,500 people were chosen because the latter figure is often used as the upper limit for a "small town" and because a town with less than 75 people is difficult to visualize as having a nucleus.[4]

The time span 1930 to 1970 was selected for study because some of the greatest changes in American society--economic depression, urbanization, governmental regulation, technological change, and mechanization of agriculture--occurred in those years. Smith (1974: 34), for example, notes that between 1933 and 1970, 55 million people in the United States moved from rural to urban areas. The last decades of the nineteenth century had seen the first signs of such change erode the conventional values of the village--individualism, laissez-faire, progress and a divinely ordained social system (Wiebe, 1967)--but events in and after the 1930's rocked the foundations of small town life.

This study will try to determine how many unincorporated places of 75 to 2,500 people existed in 1930 and in 1970 in Ohio and what percentage of Ohio's population they constituted. It will examine the 1930 to 1970 changes in the population of individual places. It will also compare the growth and decline of incorporated and unincorporated places. It will examine the establishment of new unincorporated places in standard metropolitan and non-metropolitan areas, and finally, it will investigate changes in factors (such as urbanization, industrialization, transportation and mechanization of agriculture) which may be related to changes in population in both incorporated and unincorporated places.

POPULATION CHANGES

Table 1 shows that all places of 75 to 2,500 people, both incorporated and unincorporated, made up 10.5 percent of Ohio's population in 1930 and 8.6 percent in 1970. Incorporated places did account for a higher percentage of place population in Ohio in 1930 than in 1970 (7.3 percent versus 4.7 percent).

Table 1 also shows the size distributions of incorporated and unincorporated places and the aggregate populations in each size class. The number of unincorporated places increased from 1,118 to 1,233 in the 40 year period, and their absolute population gained 94 percent. On the other hand, the total number of incorporated places with populations of 75 to 2,500 declined from 684 to 609 while their absolute population gained only three percent during the 40 years.

The percentage distributions in Table 1 show the increasing relative importance of larger places within both incorporated and unincorporated categories, but the share of the largest places is quite different. It took just 24 to 30 percent of the total number of incorporated places to accumulate more than half of the population (see the figures for the largest size classes in 1930 and in 1970). In contrast, 44 to 35 percent of the total number of unincorporated places had only 24 and 10 percent of the population for the years 1930 and 1970, respectively (see the figures for the smallest size class). The point is that the largest places account for a smaller share of population in unincorporated places versus incorporated places. The 1970 U.S. Census, by not enumerating small unincorporated places separately, counted approximately four percent of the overall Ohio population in rural nonfarm or other categories. In addition, the majority--67 percent in 1970--of named places with a population of 75 to 2,500 were not counted separately by the census, and this amounted to 28 percent of the total small town population being counted in another category. Thus census data are probably not representative of most small towns.

Table 1 obscures the nature of the changes taking place from 1930 to 1970--not only may a place grow or decline in population, but it may move from one size category to another. The data on such changes for incorporated places are presented in Table 2, a matrix for the number of incorporated places by size in 1930 and 1970. This matrix can trace changes in a given size group and determine the number of places added or subtracted over the 40 year period.

Line one indicates that approximately 46 new places or towns appeared and were incorporated between 1930 and 1970. The second line shows that 43 places existing but unincorporated in 1930 had been incorporated by 1970. Column one indicates that 15 places disincorporated or otherwise ceased to exist as a separate municipality by 1970. The 2,500+ column in Table 2 indicates that Table 1's decrease in the number of incorporated places of 75 to 2,500 people occurred because small incorporated places grew into this highest category. In fact, 155 places of fewer than 2,500 people in 1930 had more than 2,500 people by 1970.

The growth of incorporated places is clearly defined by the size of the elements to the upper right of a diagonal in the matrix. Of the 669 places which were incorporated in both 1930 and 1970, and which had a population of 75 to 2,500 in 1930, only 35 or 5 percent moved down one or more categories, while 384 or 57 percent grew to a larger category.

Table 3 presents similar data for unincorporated places. The first line of the matrix indicates that 487 new unincorporated places arose between 1930 and 1970. Line two indicates that six formerly incorporated places were added

to the unincorporated rolls. Column one shows places that Rand McNally listed in 1930 but not in 1970, but research suggests that few of these completely died; most still exist with a few houses. Column two of Table 3 (in accord with line two of Table 2) demonstrates that 43 places incorporated during the period. Column three shows places with no population in 1970. These are usually railroad stations or mine or factory sites that did have 75 or more residents in 1930.

Column four of Table 3 (according to Rand McNally's definition) shows "rural" open country localities that had a locally recognized name but no built-up section in 1970; population is scattered over a wide area. Again, research indicates that there probably was a built-up core in 1930. Column five includes 233 unincorporated places which had fewer than 75 people in 1970 but which had the minimum "place" population, as here defined, in 1930. However, 104 places grew from the smaller than 75 category in 1930 to larger categories in 1970 (see line three). This growth should be viewed with caution because nearly 1,500 unincorporated places with fewer than 75 people existed in 1930.

Of the 1,078 places which were unincorporated in both 1930 and 1970 and which had a popultion of 75 to 2,500 in 1930, only 208 or 17 percent shifted to larger size classes. On the other hand, if the categories of not listed, no population, and rural are included as population lost, 556 or approximately 50 percent of the unincorporated towns moved down the size classes.

In summary, using census and Rand McNally data, two distinct patterns emerge--57 percent of the incorporated places moved up and 50 percent of the unincorporated places moved down one or more categories between 1930 and 1970.

When one generalizes about places, there are advantages in making the individual place the unit of analysis. Table 4 shows calculated changes in population, over the period 1930 to 1970, for every incorporated and unincorporated place which had a population of 75 to 2,500 in 1930. The distribution of the changes in places grouped by initial size is given for both metropolitan and non-metropolitan areas. The data indicated that 91 percent of the incorporated places in metropolitan areas and 80 percent of the incorporated places in non-metropolitan areas gained population between 1930 and 1970. Conversely, 52 percent of the unincorporated places in metropolitan areas and 75 percent of the unincorporated places in non-metropolitan areas lost population between 1930 and 1970. The fact that unincorporated places in metropolitan areas lost population is somewhat surprising because they are often thought of as converted bedroom communities.

Table 5 shows that most of the growth in metropolitan unincorporated populations took place in "new" places established after 1930. The data also show that twice as many new places were established in metropolitan areas as in non-metropolitan areas. It is further evident that the new places in metropolitan areas were larger than those in the non-metropolitan areas. Thus growth in unincorporated places between 1930 and 1970 seemed to be occurring mostly in new places in metropolitan areas rather than in old places.

FACTORS ASSOCIATED WITH POPULATION CHANGE

Thus far we have examined the 1930 to 1970 population trends of small towns; however, factors which are associated with these trends have not been

explored. Many studies posit that changes in farm/non-farm population, mechanization of agriculture and mining, and transportation are related to population changes of small towns.

Specifically, it is said that many of the changes in small town population stem from changes in the farm population which in turn has been affected by technological advances (Goss and Rodefeld, 1978). The mechanization of agriculture has substituted capital for labor and consequently fewer farmers and farm workers are needed to cultivate the same amount of land. This mechanization has permitted economies of scale and increased size of farm. Increased farm size has also brought increased specialization and less general farming. The more specialized service needs of monocultural farming have forced many farmers to purchase imputs in large urban service centers. With fewer farmers to serve and with the needs of remaining farmers more specialized, the small town's generalized trade center functions fell on hard times.

Beale (1974) indicates that another important factor behind the declining population of small towns has been the drop in manpower needs of mining, a drop also produced by mechanization. A dramatic decline in the number of miners is demonstrated by statistics for Perry County, where more than 1,400 miners were employed in the 1940's but where fewer than 650 were working in mining in 1970. This Appalachian area of Ohio has seen the loss of whole towns (such as Harpersville) primarily because of strip mining and its massive machines which supplant labor.

In the 1960's, one of the main economic trends was decentralization of manufacturing. Although there was little growth in the number of manufacturing

plants on a national level, many moved from large cities to small towns or rural areas. Manufacturing sector employment often grew in counties such as Monore, which had a comparatively small initial proportion of workers in manufacturing and was simultaneously losing farm employment. The impact of growth in employment in manufacturing is somewhat masked because it did not often occur in counties having large industrial bases where additional non-farm jobs would be reflected in net population growth.

The ability of rural places to retain population is enhanced by larger initial size (Beale, 1974) and also by proximity to larger places. However, as urban decentralization fills in sparsely settled areas initial size becomes less of a factor. The increasing magnitude of rural non-farm population should become more important in growth and decline of small places.

Changes in transportation have produced numerous consequences for small towns. Many small towns along railroads had once served as coal and watering stations, and their "death by dieselization" is well known (Cottrell, 1951). Not only did trains quit stopping for coal, water and passengers, but their shipping functions were also replaced by trucks. Trucks' competition and loss of service often had adverse effects on bulk shippers such as feed mills, grain elevators, lumber yards and other merchants who might have found truck service fast and reliable but often more expensive than rail service. Decline in use of rail service led to population decline, but increased reliance on motor vehicles and better highway systems have allowed many farmers to find part-time employment in large towns and cities. In Ohio more than 50 percent of the farmers are part-time farmers.

The literature suggests that declines in farm population, mining employment and number of farms, as well as increases in farm mechanization and capitalization and size of farm are all related to declines in small town population; employment in manufacturing and number of manufacturing establishments as well as increase in county population and proximity to the largest city in the county are positively associated with growth. Although most studies on small town change have dealt with non-metropolitan areas, we feel that in Ohio it is important to include metropolitan areas too. In Ohio in 1970 there were 31 metropolitan counties and 57 non-metropolitan counties. Because there are so many metropolitan counties, one explanation for growth of non-metropolitan counties may simply be that these units are not really "non-metropolitan." The location of a number of non-metropolitan counties may put them within the sphere of dominance of a large urban center, and the outlying population may benefit from economic opportunities associated with metropolitan counties.

A town has a propensity to survive long after its service functions are lost. For example, the canal town of Roscoe (595 population in 1930) began to die with the close of the canal in 1906 but did not cease to be a social entity until the 1970's. The formal political structures of incorporated towns often attract local, state, and/or federal programs, so incorporated towns may experience growth independently from unincorporated towns. (For a similar argument on county seats, see Fuguitt, 1965b; Tarver and Beale, 1968.)

On the basis of preceeding analysis and discussion, we will examine changes in factors which are related to changes in population of small incorporated and unincorporated towns in the total sample as well as in metropolitan and non-metropolitan areas.

Most studies of change in small towns have dealt with population changes in incorporated places only, and only within relatively short time frames of 10 or 20 years. Attempts to explain changes have used static independent variables and often the percentage of towns in the county which lost population--not the individual town--was the dependent variable. Static variables do not capture the dynamics of change; percentage growth or decline of small towns obscures the considerable diversity among towns. All variables used in this study are calculated as change variables (1930 to 1970) with the exception of presence/absence of a local rail line in 1930, which is a binary or dummy variable. This variable and the population changes of the towns are computed for individual places. Other variables are calculated for changes in county level data.[5]

The change variables were calculated by the method developed by Bohrnstedt (1969: 113-133).[6] In brief, the method regresses scores for time two (T_2) on time one (T_1) and calculates standardized regression residuals. These residuals become the index of the "rate" of change and are used to generate change scores that are statistically independent of their magnitude at either T_1 or T_2.

The problem with this method is the difficulty in interpreting correlation results. If one of the factors changing is unidirectional, the signs are reversed. For example, in Table 6 the correlation between change in the number of farms and change in small town population is -0.137. At first glance this result would seem to indicate than an increase in the number of farms is associated with a decline in small town population or vice versa. One must remember, however, that

the number of farms in all counties was decreasing between 1930 and 1970. This correlation and its sign really indicate that an increasing decline in the number of farms is inversely related to small town growth. To put it another way, the greater the decline in the number of farms, the less is the likelihood that a small town will experience growth. Similar problems arise with land in farms and rural farm population. The greater the decline in the amount of land in farms or the greater the decline in the rural farm population, the less is the likelihood than a small town will grow. Not all farm-related variables showed 1930-1970 decreases. Part-time farming (number of days worked off farm--100 days plus), average farm size, and value of farm buildings and land increased for all counties. The greater the rate of increase in the county in part-time farming, farm size and total farm value, the greater is the likelihood that a small town will decline (-0.185, -0.123, and -0.172, respectively). The mechanization variable (number of tractors) showed both increases and decreases for certain counties. The greater the mechanization the greater is the likelihood that a small town will decline (-0.287). For the total sample, the changes in farming variables worked as hypothesized--changes in organization of farming were related to small town decline.

Examination of the correlations for metropolitan and non-metropolitan areas reveals a different picture. As might be expected, most of the changes of the sort summarized in the preceding paragraph occurred in metropolitan areas, which lost the most farmers. In fact, for non-metropolitan areas the signs were reversed although the correlation coefficients were not significant. The consistency of the pattern indicates that two different processes may be at work--

one for metropolitan areas and another for non-metropolitan areas. Changes in the organization of farming did not seem to influence small town growth or decline for non-metropolitan areas in Ohio. Perhaps the changes were masked by different processes--loss of farm population counter-balanced by an increase in non-farm population. We will, however, examine this point more carefully in the regional analysis which follows for the corn belt area of the state, where "big time" farming is concentrated.

If metropolitan vs. non-metropolitan location of the town is controlled in analysis of incorporated and unincorporated towns, results are further clarified. Incorporated/unincorporated status seems to make little difference. It is the location of a small town in a metropolitan or non-metropolitan area that is associated with the nature of change in the organization of farming and with town growth or decline. Part-time farming was the only variable, for both incorporated and unincorporated towns, associated with small town growth in non-metropolitan counties. The result makes sense. Whether a small town is incorporated or unincorporated makes no difference to change in the organization of farming; such a societal change is beyond the control of local entities.

Other changes which are beyond the scope of control of small towns are change in population of surrounding entities and migration patterns partially induced by those entities. Changes in county population were related to changes in small town population. It appears, however, that a good deal of any growth occurs in incorporated small towns both non-metropolitan (0.210) and metropolitan (0.046). Change in population size of the largest city in the county, a surrogate for distance to a large city, was significant only for incorporated non-metropolitan small towns.

Change in rural non-farm population is negatively related to change in small town population (-0.167), especially for metropolitan small towns. This result is linked to the earlier conclusion that small towns in metropolitan areas have not grown; new towns have been formed. An increase in rural non-farm populations does have a positive effect on change in population of both incorporated and unincorporated small towns in non-metropolitan areas.

Although changes in the organization of farming and growth of surrounding entities are beyond the control of small towns, changes in manufacturing often are not totally outside their influence. Local residents may organize to attract industry. Increase in number of manufacturing establishments is positively related to population growth of small towns for all except unincorporated towns in non-metropolitan areas. In those exceptions, the absence of a formal leadership structure may play a factor in being unable to recruit industry. Change in employment in manufacturing, however, is not related to small town growth or decline. A possible explanation is that many industries are labor saving and may in addition hire skilled labor from beyond county boundaries. Change in employment in mining is significantly related to growth in small town population, especially for incorporated metropolitan towns (0.469), perhaps because stone quarries and gravel pits connected with the building industry employ labor. Changes in mining employment are also related to population changes of unincorporated non-metropolitan small towns (0.098) because of mining activities in the Appalachian area of Ohio. This facet will be explored in later regional analysis.

The possible fallacy of using county level data to explain individual small town's growth or decline was mentioned earlier. In the transportation

variable for railroads, data on individual towns can be correlated with the population change for that town. If the town had a rail line in 1930 but the track was abandoned or trains (either passenger or freight) no longer stopped in the town in 1970, we gave the town a score of one. All other cases were scored zero. The results of this dummy or binary analysis indicate that the loss of rail services had the most influential effects on non-metropolitan towns (-0.187); loss of service is conversely related to population growth. This variable is also one of the few which was significantly related to unincorporated non-metropolitan towns (-0.064).

REGIONAL ANALYSIS

Ohio is an appropriate laboratory for testing regional influences because it contains both corn belt and Appalachian counties. In the Appalachian counties, the importance of agriculture declined even before the 1930's. The small farms on marginal farming land and rugged terrain did not lend themselves to mechanization and could not compete with larger corn belt farms. Thus, in the Appalachian counties, we would not expect changes in the organization of farming to be related to small town decline. Because agriculture is less important in the area, we would expect population size of the county, rural nonfarm population, and growth of larger towns to be important correlates of small town growth or decline. Mining and manufacturing are important activities in the region and should have a relationship to growth or decline of small towns. Finally, railroads are a prime export route for coal and their presence or absence should be important in growth or decline.

Table 7 indicates that few of these factors seemed important in Appalachia. The loss of railroad service was important in explaining decline in incorporated places in both metropolitan and non-metropolitan Appalachian counties.

In the corn belt counties, the importance of monoculture of corn has increased and the raising of livestock has declined. Thus there has been a shift from more general farming in 1930 to cash crops with a high degree of mechanization in the 1960's. In the corn belt counties we would expect change in organization of farming to be related most highly to small town decline. Because agriculture is more important in the area, we would expect population size of the county, rural non-farm population and growth potential associated with proximity to larger towns to be less highly correlated with small town growth and decline. Also, mining and manufacturing are not important activities in the region and should have little relationship to growth and decline of small towns. On the other hand, railroads have always been important to farmers for the shipment of grain and should be a barometer of growth or decline in an area. Table 8 shows that the relationship between metropolitan and non-metropolitan corn belt counties is nearly reverse. The changing organization of farming had its greatest effect in metropolitan corn belt counties--especially around incorporated towns. As the changes in manufacturing indicate, these were counties which were switching from agriculture to manufacturing. Few factors were highly related to small town growth and decline in non-metropolitan corn belt counties. Although for example, a declining "rate" in the loss of farms in these counties is meagerly associated with small town growth.

DISCUSSION

In 1970 about 3.9 percent of Ohio's population lived in unincorporated places of 75 to 2,500 population compared to 4.7 percent for unincorporated places in the same size categories. Of the 3.9 percent of Ohio's population living in unincorporated places, only 6 percent (18 places) was reported in the U.S. Census as unincorporated places with 2,500 inhabitants or less. The remaining 94 percent of the 3.9 percent was listed as rural non-farm or urban. These latter places number approximately 1,215 and have a combined population of 390,148. The unincorporated places are nearly twice as numerous as incorporated places. Only 14 percent of the very small places with populations of 75 to 300 were incorporated. Thus residents of unincorporated places are not differentiated from persons living in open country, even though their problems might be quite different, nor are they distinguished from residents of incorporated places of similar size. The use of data on incorporated places to imply policy for unincorporated places may be inappropriate.

The difference between the problems of unincorporated and incorporated places is also evident from their growth patterns. Of the 668 places which were incorporated in both 1930 and 1970 and which had a population of 75 to 2,500 in 1930, only five percent went to a smaller size class, while 44 percent went to a larger class. On the other hand, of the 1,083 places which were unincorporated in both 1930 and 1970 and which had a population of 75 to 2,500 in 1930, only 19 percent went to a larger class, while 52 percent went to a smaller class. The trend for incorporated small places seems to be the reverse of that for unincorporated places.

Growth prior to 1970 seems to have occurred mostly in new unincorporated places and not in older unincorporated places. In a number of cases, changes in urbanization, mechanization of agriculture, transportation, manufacturing, and mining were related to population growth or decline of small places. The magnitude of the correlation coefficients, however, was not large. Major differences were noted between metropolitan and non-metropolitan small towns but not between incorporated and unincorporated small towns.

Perhaps the structural difference between incorporated and unincorporated small places makes little difference in the twentieth century. The Jeffersonian ideal of autonomous small towns is often thought by policy makers to be anachronistic (Martindale and Hanson, 1969). If small towns are interpreted as an archaic and amusing survival of an older age, then it is not surprising that legislation and administrative decisions tend to shift power from the smaller towns to the greater centers of government, industry and finance (Vidich and Bensman, 1968). At the same time that power shifts are occurring, social scientists and policy makers are espousing the value of small towns and their importance to American democracy and ideals.

As a result we find that legal corporate status is less important than the location of a small town within or without a metropolitan area. Although many of the correlations with industrialization, changing organization of farming, and transportation were significant, their magnitude was not great. Perhaps unspecified variables such as government regulations which affect taxation, incorporation, revenue sharing, annexation, and the formation of

special districts may influence small town growth or decline more than mechanization and transportation changes do. For example, the revised Ohio code specifies that an incorporating area must consist of not less than two square miles, include a population of not less than six hundred persons per square mile, and have an assessed valuation of real, personal and public utility property subject to general property taxation of not less than $2000 per capita. The code effectively prohibits most small unincorporated areas from incorporating.

Controversies may develop between unincorporated small towns and counties and/or townships. Counties and townships have traditionally exercised jurisdiction over unincorporated areas and provided them with basic services. The desire for incorporation often reflects dissatisfaction with county and township government's police protection, road maintenance, and other community services, especially in counties which are becoming urbanized. The conflict is often a farm/non-farm one.

The provision for special districts for sewage and water services and the flow of more such powers to the hands of townships and counties have stopped the annexation incentive for areas adjacent to many small towns. In fact, counties and townships may be able to provide the services more cheaply than small towns can. In some cases the township gets its water from the same source as the small town but costs township residents less because of a larger population base. Also, the township may be more efficient; in the township, water is not piped to a small town waterworks for redistribution.

The influence of the federal government's policies on small towns is most clearly seen in federal revenue sharing. Money is allocated to incorporated

small towns through a complicated formula utilizing population, urban population, per capita income, and tax effort. The last remains the dominant factor.

Most small towns are at a serious disadvantage with this formula (Hitzhusen, 1978). First, the most characteristic feature of American small-town politics is a desire to avoid making decisions that challenge the low-tax ideology. Because small towns are dominated by small businessmen, political leaders are concerned about taxes first and services second. The small businessman regards the property tax as a cost of doing business; expanded services threaten profits and, he fears, foretell possible economic disaster. The small community usually seeks to avoid innovation, strongly opposes the "social service state," and tries to postpone as many decisions as possible. This orientation obviously gives small towns a low "tax effort" in the federal formula.

In addition, some forms of tax revenue and all forms of non-tax revenue are omitted from the formula, and this provision introduces a systematic bias against small towns in federal revenue sharing. For example, school and special districts are excluded. Rural areas pay a disproportionate share of their total taxes in these forms. Small towns raise a higher proportion of the costs of local government or community services by donations and various fund raising activities, which are also excluded from the formula.

Even when programs are specifically tailored for small towns, the results may be negative. For example, the Housing and Community Development Act of 1974 was to alleviate the inequalities of the grant system. Block grants are disbursed according to a formula based on population, poverty, and overcrowding--not the "grantsmanship" skill that few small towns possess. But as with many other programs,

small town officials found difficulty in writing proposals and providing the general expertise for obtaining funding under the Act (Galbreath, 1975). An evaluation team for block grant programs found that local officials would like to do business with the agency but often encountered difficulty in dealing with urban-oriented regulations and "unnecessary" paperwork (National Civic Review, 1978).

It is not surprising that 50 years after Lynds' studies, Caplow (Time, 1978) is finding in Middleton III that residents, and by implication most small town Americans, are living in two different centuries. They are adjusting to industrialization while holding onto the social values of 19th century rural America. Traditional small town values have changed very little in 50 years; we have not abandoned an older America of smaller communities but have accommodated the methods and values of an emerging urban, bureaucratic, relativistic society (Coben and Ratner, 1970). This value orientation probably explains why many small towns which have lost their economic functions die a very slow death and seldom disappear completely.

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FOOTNOTES

[2]This interpretation was first questioned in Howe's Story of a County Town (1884). Later, Anderson's Winesburg, Ohio (1919) and Lewis' Main Street (1920) and Babbit (1922) focused on small town hypocrisies and the fallacies of boosterism. Today television often perpetuates this harsher view of small towns in America (Stein, 1976). This study will not attempt to measure such socio-cultural views of small towns and will refer to them only as a rationale for distinguishing between small towns in standard metropolitan areas and those in non-metropolitan areas. Small towns in the former areas are more likely to be suburban communities or satellite towns of larger cities. To these "city" dwellers the small town often seems drab, narrow and complacent. Residents of the towns in non-metropolitan areas are more likely to subscribe to the small town ideology (See Cook and Swanger, 1977).

[3]Rand McNally uses a self-reporting method for unincorporated places. Thus a good deal of variability may exist among respondents in their definitions of a "place" and what area constitutes a "place." These are, however, the only data available. For an expanded discussion of the problems of reliability of Rand McNally estimates, see Rodefeld (n.d.).

[4]The term small town is used interchangeably with "place" but a place may be larger than 2,500 or smaller than 75.

[5]The authors recognize the ecological problem of using county level data to explain individual small town growth and decline. Robinson (1950) presents a discussion of the problem of using ecological and individual correlations. Robinson states that an ecological correlation is almost certainly not equal to its corresponding individual correlation. Therefore, ecological correlations can not validly be used as substitutes for individual correlations. Menzel (1950), however, states that ecological correlations may be of great value even without reflecting individual correlations, and that they are used by many researchers without any thought of serving as substitutes for individual correlations.

[6]A number of measures of change were considered--raw change, change in proportions, and residual change. Raw change is the actual difference between T_1 and T_2. The main problem with this measure is that a town of 20 which grew to 30 had an absolute change of 10, as did a town of 1000 which increased to 1010. The proportions in these changes were obviously different. Changes in proportions represent an advance over the raw method but also have some problems. Changes are contaminated by regression effects attributable to initial size. For example, larger towns may grow at a faster rate than smaller towns.

TABLE 1. Number and Population of Incorporated and Unincorporated Places by Size Class, Ohio, 1930 and 1970

Size Class	1930						1970					
	Incorporated		Unincorporated		Total		Incorporated		Unincorporated		Total	
	Number	Population	Number	Population	Number	Population	Number	Population	Number	Population	Number	Population
Total	684	483,863	1,118	214,274	1,802	698,137	609	498,546	1,233	415,138	1,842	913,684
75 - 149	36	4,373	495	51,626	531	55,999	23	2,701	430	42,826	453	45,527
150 - 299	146	33,365	403	78,910	549	112,275	103	23,677	367	71,930	470	95,607
300 - 499	144	54,064	174	58,623	318	115,687	121	47,533	180	65,283	301	112,816
500 - 749	119	73,888	27	11,701	146	85,589	95	59,208	120	69,955	215	129,163
750 - 999	78	67,815	9	6,450	87	74,265	84	72,396	57	48,650	141	121,046
1000 - 2499[1]	161	247,358	10	6,964	171	254,322	183	293,031	79	116,494	262	409,525
					Percentage Distribution							
Total	100	100	100	100	100	100	100	100	100	100	100	100
75 - 149	5	1	44	24	29	8	4	1	35	10	25	5
150 - 299	21	7	36	37	31	16	16	5	30	17	25	10
300 - 499	21	11	16	27	18	17	20	9	14	16	16	13
500 - 749	18	15	2	6	8	12	16	12	10	17	12	14
750 - 999	11	14	1	3	5	11	14	14	5	12	8	13
1000 - 2499	24	52	1	3	9	36	30	59	6	28	14	45
Percentage of Ohio's Population		7.3%		3.2%		10.5%		4.7%		3.9%		8.6%

SOURCES: United States Censuses and Rand McNally Commercial Atlases.

[1]This category includes the total population of Union City Ohio-Indiana.

TABLE 2. Cross-Classification of the Number of Incorporated Places by Size, Ohio, 1930-1970

Size Class in 1930	Status & Size in 1970									
	Dropped Out[1]	1-74	75-149	150-299	300-499	500-749	750-999	1000-2499	2500+	Total
New Places[2]		1	4	0	4	3	4	5	25	46
New Incorporation[3]			3	4	8	5	5	3	15	43
1 - 74		1	2	1	1					5
75 - 149	2		7	18	5		1	1	2	36
150 - 299	5		6	75	41	10		3	6	146
300 - 499	1		1	3	52	45	18	10	14	144
500 - 749	2			2	7	26	39	33	10	119
750 - 999	1				3	4	13	45	12	78
1000 - 2499	4					2	4	80	71	161
2500 Plus	—	—	—	—	—	—	—	3	170	173
Total	15	2	23	103	121	95	84	183	325	951

SOURCES: Bureau of the Census, Fifteenth Census of the United States: 1930, Population: Number and Distribution of Inhabitants (United States Printing Office: Washington, D. C., 1931) Volumn I, pp. 864-870; Bureau of the Census, Census of Population, 1970, Number of Inhabitants, Final Report PC(1)-A37 Ohio (United States Printing Office, Washington, D. C.).

[1]Disincorporated or otherwise ceased to exist as a separate municipality. Places which disincorporated are Cannelville, Deavertown, Bazil, Western Star, Springhills, and Santoy. Only one of these grew in population. The other places were combined or annexed into larger units.

[2]Places not listed by Rand McNally in 1930.

[3]Places listed by Rand McNally in 1930 with their respective populations but not incorporated or enumerated by the U.S. Census in 1930.

TABLE 3. Cross-Classification of the Number of Unincorporated Places by Size in Two Rand McNally Censuses, Ohio, 1930 and 1970*

Size Class in 1930	Status & Size Class in 1970												
	Not Listed[1]	Incorporated[2]	No Population[3]	Rural[4]	1-74	75-149	150-299	300-499	500-749	750-999	1000-2499[5]	2500+[5]	Total
Did not exist[6]						117	117	66	54	36	63	34	487
Incorporated[7]	2			1		1	2						6
1 - 74		3				57	16	12	8	3	1	4	104
75 - 149	37	10	10	55	158	133	54	22	9	2	4	2	495
150 - 299	10	11	3	20	61	96	132	32	21	6	4	7	403
300 - 499	5	7	0	3	12	24	41	44	22	6	5	5	174
500 - 749	1	6	1	1	1	1	5	2	5	2	0	2	27
750 - 999		1		1	1			1	1	1	2	1	9
1000 - 2499		7		1	0	2		1		1		0	10
2500 Plus	0	0	0	0	0	0	___	___	___	___	___	1	1
Total	55	43	14	82	233	430	367	180	120	57	79	56	1716

SOURCE: Rand McNally Commercial Atlases. *The population figure refers to the central built-up section of the community and excludes those living on farms and others living at a distance.

[1]Places listed by Rand McNally in 1930's but dropped from the listing in later years. Our search indicated that failure to be listed was not due to name changes. Many places still "exist" with a few houses. Some places, however, have died.

[2]Places which existed prior to 1930 but did not incorporate until sometime between 1930 and 1970.

[3]No population indicates most of these places are railroad stations, but some are factory sites, mines, power plants, etc. The designation indicates that the place is in the open country and is not associated with any settlement.

[4]Places designated as rural are open-country localities that have a locally recognized name although no built-up section exists and the population is scattered over a wide area.

[5]The Bureau of the Census reported a 1970 population for 46 of these unincorporated places, but for the great majority the figures given are Rand McNally's 1971 estimates.

[6]Places not listed by Rand McNally in 1930's and presumed not to exist.

TABLE 4. Distribution of Incorporated and Unincorporated Towns by Changes in Population, Metropolitan and Nonmetropolitan Ohio, 1930 - 1970

	1970 STATUS																							
	METROPOLITAN								NONMETROPOLITAN								TOTAL							
Size in	No Change		Decline		Growth		Total		No Change		Decline		Growth		Total		No Change		Decline		Growth		Total	
1930	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
INCORPORATED																								
Total			26	(8.8)	270	(91.2)	296	(100.0)	2	(.5)	72	(19.0)	305	(80.5)	379	(100.0)	2	(.3)	98	(14.5)	575	(85.2)	675	(100.0)
75 - 149			1	9.1	10	90.9	11	100.0			7	28.0	18	72.0	25	100.0			8	22.2	28	77.8	36	100.0
150 - 299			4	6.9	54	93.1	58	100.0	2	2.3	25	29.1	59	68.6	86	100.0	2	1.4	29	20.1	113	78.5	144	100.0
300 - 499			3	4.7	61	95.3	64	100.0			13	16.5	66	83.5	79	100.0			16	11.2	127	88.8	143	100.0
500 - 749			5	10.4	43	89.6	48	100.0			13	18.6	57	81.4	70	100.0			18	15.3	100	84.7	118	100.0
750 - 999			4	10.8	33	89.2	37	100.0			6	15.0	34	85.0	40	100.0			10	13.0	67	87.0	77	100.0
1000 - 2499			9	11.5	69	88.5	78	100.0			8	10.1	71	89.9	79	100.0			17	10.8	140	89.1	157	100.0
UNINCORPORATED																								
Total	14	(3.2)	229	(52.3)	195	(44.5)	438	(100.0)	29	(4.3)	512	(75.3)	139	(20.4)	680	(100.0)	43	(3.8)	741	(66.3)	334	(29.9)	1118	(100.0)
75 - 100	5	2.6	111	57.5	77	39.9	193	100.0	13	4.3	231	76.5	58	19.2	302	100.0	18	3.6	342	69.1	135	27.3	495	100.0
150 - 299	7	4.6	73	47.7	73	47.7	153	100.0	9	3.6	192	76.8	49	19.6	250	100.0	16	3.9	265	65.8	122	30.3	403	100.0
300 - 499	2	3.0	34	50.7	31	46.3	67	100.0	7	6.5	73	68.2	27	25.2	107	100.0	9	5.2	107	61.5	58	33.3	174	100.0
500 - 749			4	--	7	--	11	--	0	--	12	--	4	--	16	--			16	59.3	11	40.7	27	100.0
750 - 999			2	--	3	--	5	--	0	--	3	--	1	--	4	--			5	55.6	4	44.4	9	100.0
1000 - 2499			5	--	4	--	9	--			1	--			1	--			6	60.0	4	40.0	10	100.0

SOURCE: Rand McNally Commercial Atlas and the United States Census, 1930 and 1970.

TABLE 5. Size of New Unincorporated Places Established Since 1930, Metropolitan and Nonmetropolitan Ohio

Size Class in 1970	Metropolitan Area		Nonmetropolitan Area		Total	
	Frequency	Percentage	Frequency	Percentage		
75 - 149	60	18.0	57	37.0	117	24.0
150 - 299	73	21.9	44	28.6	117	24.0
300 - 499	50	15.0	16	10.4	66	13.6
500 - 749	37	11.1	17	11.0	54	11.1
750 - 999	27	8.1	9	5.8	36	7.4
1000 - 2499	54	16.2	9	5.8	63	12.9
2500+	32	9.6	2	1.3	34	7.0
Total	333	100.0	154	100.0	487	100.0

TABLE 6. Zero Order Correlations for the Relationship Between Changes in Selected County Variables and Changes in Population of Incorporated and Unincorporated Places, by Metropolitan and NonMetropolitan Areas, Ohio, 1930 to 1970

Variables	Total			Metropolitan		NonMetropolitan	
	Total (N=1793)	Metropolitan (N=734)	NonMetropolitan (N=1059)	Incorporated[1] (N=296)	Unincorporated (N=438)	Incorporated[1] (N=379)	Unincorporated (N=680)
Change in Organization of Farming							
1. Δ (Decrease) in No. of Farms	-.137**	-.144*	.007	-.216**	-.112**	.044	.064*
2. Δ (Increase) in No. of Tractors	-.287**	-.326	.051*	-.385**	-.248**	.065	.096**
3. Δ (Decrease) in Land in Farms	.071**	.166**	.010	.223**	-.066	.058	.058
4. Δ (Increase) in No. of Worked Off Farm (100 Days)	-.185**	-.271**	.059*	-.362**	-.092*	.099*	.078*
5. Δ (Decrease) in Rural Farm Population	-.141**	-.180**	.009	-.264**	-.108**	.052	.050
6. Δ (Increase) in Average Farm Size	-.123**	-.190**	.014	-.238**	-.082*	.026	-.042
7. Δ in Value of Farm Buildings & Land	-.172**	-.187**	.016	-.262**	-.129**	.080	.036
Change in Population							
8. Δ in County Population	.135**	.064*	.077**	.046	.136**	.210**	-.007
9. Δ in Population of Large City in County	.016	-.037	.031	-.067	.065	.164**	-.057
10. Δ in Rural Nonfarm Population	-.167**	-.275**	.090**	-.373**	-.076	.107*	.074*
Change in Manufacturing and Mining							
11. Δ in Employment in Manufacturing	.018	-.015	.009	.024	-.009	.059	-.067*
12. Δ in No. of Manufacturing Establishments	.177**	.104**	.099**	.112*	.146**	.209**	.018
13. Δ in Employment in Mining	.232**	.328**	.052*	.469**	-.039	.071	.098**
Change in Transportation							
14. Δ Possession of Railroad 1930	-.061**	-.064*	-.187**	-.136**	-.045	-.160**	-.064*

*Significant at the .05 level; Significance levels are not required because this is the total universe of small towns.
**Significant at the .01 level.
[1]All of these places were incorporated in 1930 but some may not have been incorporated in 1970.

TABLE 7. Zero Order Correlations for the Relationship Between Changes in Selected County Variables and Changes in Population of Incorporated and Unincorporated Places, By Region for Metropolitan and Nonmetropolitan Areas, Ohio 1950 to 1970

	APPALACHIAN COUNTIES				NONAPPALACHIAN COUNTIES			
	Metropolitan		Nonmetropolitan		Metropolitan		Nonmetropolitan	
	Incorporated (N=33)	Unincorporated (N=82)	Incorporated (N=144)	Unincorporated (N=317)	Incorporated (N=263)	Unincorporated (N=336)	Incorporated (N=235)	Unincorporated (N=363)
Change in Organization of Farming								
1. Δ(Decrease) in No. of Farms	.3933	.1997	-.0575	.0451	-.2710**	-.1707**	.0090	.0238
2. Δ No. of Tractors	.4014	.1484	.1044	.0292	-.3792**	-.2509**	.0052	.1399
3. Δ(Decrease) in Land in Farms	.4230	.2066	-.0718	.0408	.1636	-.1211	-.0103	-.0093
4. Δ(Increase) in No. of Days Worked Off Farm (100 Days)	.4683	.2009	.1332	.0297	-.4076**	-.1448	.0311	.0735
5. Δ(Decrease) in Rural Farm Population	.2843	.1728	-.0444	-.0206	-.3156**	-.1690**	.0080	.0468
6. Δ(Increase) in Average Farm Size	-.0518	-.1035	.0490	-.0293	-.2544**	-.0809	.0645	-.0151
7. Δ in Value of Farm Buildings and Land	.3384	.1864	.0221	.0232	-.3058**	-.1588**	.0198	-.0008
Change in Population								
8. Δ in County Population	.4685	.2157	.0691	-.1545	.0091	.0954	.2432**	.0704
9. Δ in Population of Largest City in County	.4787	.2158	.0007	-.2017**	-.0859	.0388	.1989**	.0774
10. Δ Rural NonFarm Population	.4764	.2162	.1558	.0623	-.3921**	-.1271	.0447	.0494
Change in Manufacturing and Mining								
11. Δ in Employment in Manufacturing	.4557	.1906	.0613	-.2069**	.0000	-.0276	.0455	-.1152
12. Δ in No. of Manufacturing Establishments	-.1052	.0392	.1904	-.0115	.0812	.1215	.1709	-.0074
13. Δ in Employment in Mining	.0363	-.0698	.0765	.0980	.5110**	-.0046	.0354	.0688
Change in Transportation								
14. Δ Possession of Railroad 1930	-.5063**	-.1392	-.2118*	-.0165	-.1188	-.0391	-.1500	-.1246

*Sig. at .05 level

**Sig. at .01 level

TABLE 8. Zero Order Correlations for the Relationship Between Changes in Selected County Variables and Changes in Population of Incorporated and Unincorporated Places, By Region for Metropolitan and Nonmetropolitan Areas, Ohio 1950 to 1970

	CORNBELT COUNTIES				NONCORNBELT COUNTIES			
	Metropolitan		Nonmetropolitan		Metropolitan		Nonmetropolitan	
	Incorporated (N=118)	Unincorporated (N=120)	Incorporated (N=155)	Unincorporated (N=205)	Incorporated (N=178)	Unincorporated (N=318)	Incorporated (N=224)	Unincorporated (N=475)
Change in Organization of Farming								
1. Δ (Decrease) in No. of Farms	-.5789**	-.2070	.1091	.0391	-.0200	-.0746	.0440	.0604
2. Δ In No. of Tractors	-.4656**	-.2381*	.0857	.1128	-.3618**	-.2544**	.0567	.0915
3. Δ (Decrease) in Land in Farms	-.5467**	-.2084	.1748	.0207	.4963**	.0065	.0836	.0564
4. Δ (Increase) in No. of Days Worked Off Farm (100 Days)	-.2497*	.0838	.1218	.1240	-.3797**	-.1288	.1023	.0629
5. Δ (Decrease) in Rural Farm Population	-.5056**	-.1616	.2264*	.0501	-.1480	-.0843	.0203	.0395
6. Δ (Increase) In Average Farm Size	.3837**	.0218	-.0928	.0407	-.4024**	-.0976	.0565	-.0481
7. Δ In Value of Farm Buildings and Land	-.3760**	-.2072	.1610	-.0242	-.2715**	-.1297	.1043	.0314
Change in Population								
8. Δ In County Population	.5804**	.2181	.0261	.0310	-.1637	.1465*	.2456**	-.0149
9. Δ In Population of Largest City in County	.5298**	.0245	.1411	.0809	-.3864**	.2915**	.1724*	-.0799
10. Δ In Rural Nonfarm Population	-.2607*	-.0946	.0879	.0742	-.4035**	-.0954	.1173	.0831
Change in Manufacturing and Mining								
11. Δ In Employment in Manufacturing	.4117**	.2848**	.1297	.0626	-.0176	-.0425	.0654	-.0698
12. Δ In No. of Manufacturing Establishments	.4127**	.3323**	-.0616	-.0564	.0026	.0886	.2938**	.0264
13. Δ In Employment in Mining	.4987**	.0157	.1053	.0945	.4538**	-.0488	.0576	.0961
Change in Transportation								
14. Δ In Possession of Railroad 1930	-.0653	-.0882	-.2403**	-.1549	-.1602	-.0312	-.1288	-.0469

*Sig. at .05 level
**Sig. at .01 level